

Notice of Allowability

Application No.

10/649,679

Examiner

Janis L. Dote

Applicant(s)

TANAKA ET AL.

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/9/05.
2. ☒ The allowed claim(s) is/are 1-5 and 11-30.
3. ☒ The drawings filed on 28 August 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 5/23/05.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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1. This office action is responsive to the amendment filed on May 9, 2005, after the final office mailed on Mar 3, 2005. The examiner acknowledges the amendments to claims 5, 25, 29, and 30, and the cancellation of claims 31-35, set forth in the amendment filed on May 9, 2005. Claims 1-5 and 11-30 are pending.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

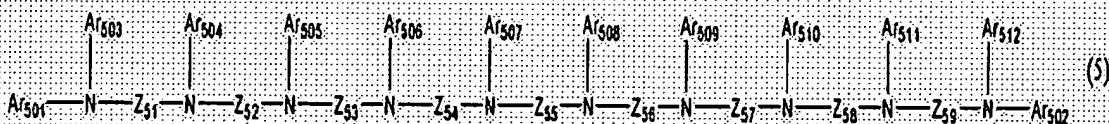
(1) Claim 24 has been amended as follows:

At line 15, delete " ~~(s)~~ ".

(2) Replace claims 5, 25, and 30 in the amendment filed on May 9, 2005, with the following:

-- 5. (Currently Amended) An electrophotographic photosensitive member comprising a conductive support and a photosensitive layer provided on the support, wherein;

the charge-transporting material having a structure represented by the following Formula (5) and having a molecular weight of from 1,500 to 4,000 is held in a proportion of from 90% by weight to 100% by weight based on the total weight of the charge-transporting material contained in said photosensitive layer:



wherein A₅₀₁ to A₅₁₂ each independently represent a substituted or unsubstituted monovalent aromatic carbocyclic group or a substituted or unsubstituted monovalent aromatic heterocyclic group, and Z₅₁ to Z₅₉ each independently represent a substituted

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or unsubstituted divalent aromatic carbocyclic group or a substituted or unsubstituted divalent aromatic heterocyclic group, and wherein one of Z_{51} to Z_{59} in Formula (5) [[, one]] is a substituted or unsubstituted dibenzofuranylene group or a substituted or unsubstituted dibenzothiophenylylene group, and the balance are each a substituted or unsubstituted biphenylene group. --

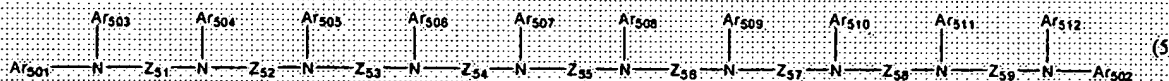
-- 25. (Currently Amended) A process cartridge comprising an electrophotographic photosensitive member and at least one means selected from the group consisting of a charging means, a developing means and a cleaning means which are integrally supported; and being detachably mountable on the main body of an electrophotopaphic apparatus; the electrophotographic photosensitive member comprising a conductive support and a photosensitive layer provided on the support, wherein;

said photosensitive layer contains at least one charge-transporting material;

wherein at least one of said charge-transporting material contained in said photosensitive layer is a charge-transporting material having a structure represented by the following Formula (5) and having a molecular weight of from 1,500 to 4,000; and

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the charge-transporting material having a structure represented by the following Formula (5) and having a molecular weight of from 1,500 to 4,000 is held in a proportion of from 90% by weight to 100% by weight based on the total weight of the charge-transporting material contained in said photosensitive layer:



wherein A₅₀₁ to A₅₁₂ each independently represent a substituted or unsubstituted monovalent aromatic carbocyclic group or a substituted or unsubstituted monovalent aromatic heterocyclic group, and Z₅₁ to Z₅₉ each independently represent a substituted or unsubstituted divalent aromatic carbocyclic group or a substituted or unsubstituted divalent aromatic heterocyclic group, and wherein one of Z₅₁ to Z₅₉ in Formula (5) [[, one]] is a substituted or unsubstituted dibenzofuranylene group or a substituted or unsubstituted dibenzothiophenylylene group, and the balance are each a substituted or unsubstituted biphenylene group. --

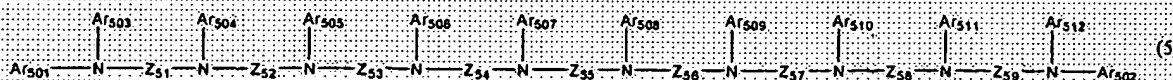
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-- 30. (Currently Amended) An electrophotographic apparatus comprising an electrophotographic photosensitive member, a charging means, an exposure means, a developing means and a transfer means; the electrophotographic photosensitive member comprising a conductive support and a photosensitive layer provided on the support, wherein;

said photosensitive layer contains at least one charge-transporting material;

wherein at least one of said charge-transporting material contained in said photosensitive layer is a charge-transporting material having a structure represented by the following Formula (5) and having a molecular weight of from 1,500 to 4,000; and

the charge-transporting material having a structure represented by the following Formula (5) and having a molecular weight of from 1,500 to 4,000 is held in a proportion of from 90% by weight to 100% by weight based on the total weight of the charge-transporting material contained in said photosensitive layer:



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wherein A₅₀₁ to A₅₁₂ each independently represent a substituted or unsubstituted monovalent aromatic carbocyclic group or a substituted or unsubstituted monovalent aromatic heterocyclic group, and Z₅₁ to Z₅₉ each independently represent a substituted or unsubstituted divalent aromatic carbocyclic group or a substituted or unsubstituted divalent aromatic heterocyclic group, and wherein one of Z₅₁ to Z₅₉ in Formula (5) [[, one]] is a substituted or unsubstituted dibenzofuranylene group or a substituted or unsubstituted dibenzothiophenylene group, and the balance are each a substituted or unsubstituted biphenylene group. --

3. The examiner's amendment to claim 24 corrects an obvious typographic error that occurred during the rewriting of claim 24 in the amendment filed on May 9, 2005.

The amendments filed on May 9, 2005, to claims 5, 25, and 30, did not comply with 37 CFR 1.121 because the amendments tried to delete the text ", one" by using a combination of single and double brackets, i.e., [, [one]]. The examiner's amendment rewriting claims 5, 25, and 30 properly deletes the text ", one" with the proper markings, i.e., [[, one]].

The examiner's amendment to claim 24 merely corrects a typographic error. The examiner's amendment to claims 5, 25,

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and 30 is limited to correcting the non-compliance. The examiner's amendment does not make any substantive changes to the claims. Accordingly, authorization from applicants is not needed to make the examiner's amendment. See www.USPTO.gov, Patents, Frequently asked questions on Revised amendment practice (posted 14 Aug. 2003, updated 20 Jan. 2005, updated A11 on 09 Feb. 2005), questions E2, E4, and G1. The examiner informed applicants' representative Mr. Saxon (Reg. No. 24,947) of the examiner's amendment to claims 5, 24, 25, and 30. See the Interview Summary Record of May 23, 2005.

REASONS FOR ALLOWANCE

4. The following is an examiner's statement of reasons for allowance:

The objections of claims 5, 15, 20, 25, and 30 set forth in the office action mailed on Mar. 3, 2005, paragraph 5, have been withdrawn in response to the amendments to claims 5, 25, and 30 set forth in the examiner's amendment in paragraph 2 supra.

The rejection of claims 31-35 under 35 U.S.C. 103(a) over US 3,265,496 (Fox) set forth in the office action mailed on Mar. 3, 2005, paragraph 7, has been mooted by the cancellation of claims 31-35 set forth in the amendment filed on May 9, 2005.

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Claims 1-5 and 11-30 are allowable over the prior of record for the reasons discussed in the office mailed on Mar. 3, 2005, paragraph 2, which are incorporated herein by reference.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (703) 872-9306.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLD
May 23, 2005

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PRIMARY EXAMINER
GROUP 1500
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